

**5th WORKSHOP ON THE SCIENTIFIC COOPERATION
BETWEEN GERMAN RESEARCH CENTERS AND JINR
DUBNA (2003-2005), proposals 2006-2008**

Theoretical Physics:

Heisenberg-Landau Programme

(Since 1991, initiated by V.G. Kadyshevsky, D.V. Shirkov, H. Rollnik; secretary: W. Kleinig)

Main aims:

- initiate and perform scientific collaborations between JINR and about 60 institutions in Germany
- perform schools/ workshops/ conferences including longer stays at the JINR Dubna
- include young physicists from Russia and Germany, but also from the FSU, in particular Middle Asia, Caucasus
- improve the infrastructure of the BLTP

Research topics at present:

- Elementary Particles and Fields
- Nuclear Physics
- Solid State Physics
- Modern Mathematical Physics

Financial Support (BMBF):

2003 125 kEuro

2004 120 kEuro

2005 130 kEuro

Results:

- 30 - 40 Heisenberg – Landau Scholarships
- 5 - 10 Heisenberg – Landau visits
- 80 - 100 joint publications per year

Details are given in the annual minutes of the steering committee of the Heisenberg – Landau programme. During these annual meetings of the steering committee, an evaluation of new proposals is also performed by experts from Germany as well as from the JINR Dubna. The German experts are proposed by the Deutsche Physikalische Gesellschaft, each project of the Heisenberg – Landau programme is evaluated with high competence.

During all the years, it has been stated that a relatively small amount of money was used to produce a lot of new results. This reflects the high efficiency of the Heisenberg – Landau programme.

Examples:

...for the successful cooperations are given by V. Voronov in his talk.

- With respect to Solid State Physics, the cooperation between N.M. Plakida, H. Eschrig et al. from Dresden should be mentioned.
- Interesting results comparing theory and experiment for the thermal conductivity of superconducting Nb were obtained by D.V. Churochkin, S. Sahling and V.A. Osipov, to be published in Phys. Rev. B.
- The Research Workshop “Nucleation Theory and Applications” (J. Schmelyer et al.) was performed with high scientific quality and participation from different countries.

New Activities:

DIAS-TH (A.T. Filippov)

HISS Dubna (D. Blaschke)

Perspectives:

- Develop the scientific collaboration between Western and Eastern European countries
- Organize attractive Workshops, Schools, Conferences
- Provide Theoretical Expertise for actual and future experiments related to the research topics of the JINR and cooperating Institutions in Germany
- Acquire additional funding: DAAD, RFBR, UNESCO-ROSTE, etc.; combine with programs similar to Heisenberg – Landau: Votruba – Blokhintsev (Czech), Bogoliubov – Infeld (Poland)

Prerequisites:

... which are important for the collaboration with the Dubna research site:

1. High quality of scientific research, leading experts
2. Education of young scientists from East and West
3. Adequate infrastructure

The collaboration with JINR provides interesting perspectives for German research Institutions.